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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,495	10/31/2000	Allen Louis Gorin	112233-CONT 2	8836

26652 7590 06/05/2007

AT&T CORP.
ROOM 2A207
ONE AT&T WAY
BEDMINSTER, NJ 07921

EXAMINER	
PHAN, JOSEPH T	
ART UNIT	**PAPER NUMBER**
2614	

MAIL DATE	DELIVERY MODE
06/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/699,495	GORIN ET AL.	
	Examiner	Art Unit	
	Joseph T. Phan	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7,9-13,15-30,34-40,42-54,56 and 57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 7, 9-13, 15-30, 34-40, 42-54, and 56-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 7, 9-13, 15-30, 34-40, 42-54, and 56-57 rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Beyda, Patent #6,487,277.

Regarding claim 1, Beyda teaches an automated task classification system that operates on a task objective of a user, comprising:

a recognizer that spots at least one of a plurality of meaningful phrases in substantially simultaneous user verbal and non-verbal input(col.7 lines 12-31 and col.8 lines 29-37), each of the plurality of meaningful phrases having an association with at least

one of a predetermined set of task objectives(col.9 line 65-col.10 line 17), and a task classifier that makes a classification decision based. at least partly on the spotted at least one of the plurality of meaningful phrases(col.7 lines 13-31 and col.8 lines 29-37).

Beyda does not specifically disclose the user verbal and non-verbal input being simultaneous.

However Beyda does disclose the user being able to perform verbal and non-verbal input within the same communication(col.8 lines 29-37) and therefore reads on the claimed phrase "substantially simultaneous". It is noted that the term "substantially" is not definite and is not limited by a range, therefore the examiner reads "substantially simultaneous" as within the same communication which Beyda performs(col.7 lines 12-31 and col.8 lines 29-37).

Regarding claim 2 Beyda teaches the automated task classification system of claim 1, wherein the meaningful phrases are expressed in a multimodal form(col.8 lines 29-37).

Regarding claim 3 Beyda teaches the automated task classification system of claim 2, wherein the multimodal form includes inputs from at least one channel(col.7 lines 13-31 and col.8 lines 29-37).

Regarding claim 7 Beyda teaches the automated task classification system of claim 1, wherein the meaningful phrases in the user's input communication received by the recognizer are derived from the user's actions (col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 9 Beyda teaches the automated task classification system of claim 1, further comprising a dialog module that enters into a dialog with the user to obtain a feedback response from the user (col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 10 Beyda teaches the automated task classification system of claim 9, wherein the dialog module prompts the user to provide a feedback response that includes additional information with respect to the user's initial input communication(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 11, Beyda teaches the automated task classification system of claim 9, wherein the dialog module prompts the user to provide a feedback response that includes confirmation with respect to at least one of the set of task objectives determined in the classification decision(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 12, Beyda teaches the automated task classification system of claim 1, wherein the task classifier routes the input communication based on the classification decision(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 13 Beyda teaches the automated task classification system of claim 12, wherein the task objective is performed after the input communication is routed by the task classifier(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 15, Beyda teaches the automated task classification system of claim 1, wherein the system is used for customer care purposes(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 16 Beyda teaches the automated task classification system of claim 1, wherein the classification decision and the corresponding input communication of the user are collected by the system for automated learning purposes(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 17, Beyda teaches the automated task classification system of claim 1, wherein the association between the plurality of meaningful phrases(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17), and the predetermined set of task objectives is based at least partly on a measure of usefulness of one of the plurality of meaningful phrases to a specified one of the predetermined task objectives(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17; performing the action is 100% useful).

Regarding claim 18, Beyda teaches the automated task classification system of claim 17, wherein the usefulness measure is a salience measure(col.7 lines 13-31 and col.8 lines 29-37).

Regarding claim 19, Beyda teaches the automated task classification system of claim 18, wherein the salience measure is represented as a conditional probability of the task objective being requested given an appearance of one of the plurality of meaningful phrases in the input communication, the conditional probability being a highest value in a distribution of conditional probabilities over the set of predetermined

task objectives*(col.7 lines 13-31 and col.8 lines 29-37; when phrase is understood, it is 100% probable of the task objective performed of one of many task objectives).*

Regarding claim 20, Beyda teaches the automated task classification system of claim 18, wherein each of the plurality of meaningful phrases has a salience measure exceeding a predetermined threshold*(col.7 lines 13-31 and col.8 lines 29-37; 100% salience measure exceeds matched threshold when action is performed.*

Regarding claim 21, Beyda teaches the automated task classification system of claim 1, wherein the association between the meaningful phrases and the predetermined set of task objectives is based at last partly on a measure of commonality within a language of the meaningful phrases(col.7 lines 13-31, col.8 lines 29-37; 100% commonality in Beyda's English language).

Regarding claim 22, Beyda teaches the automated task classification system of claim 21, wherein the measure of commonality is a mutual information measure(col.7 lines 13-31, col.8 lines 29-37; matching understood phrases is mutual).

Regarding claim 23, Beyda teaches the automated task classification system of claim 22, wherein each of the plurality of meaningful phrases has a mutual information measure exceeding a predetermined threshold*(col.7 lines 13-31 and col.8 lines 29-37; measure exceeds matched threshold when action is performed.*

Regarding claim 24, Beyda teaches the automated task classification system of claim 1, wherein the task classifier makes the classification decision using a confidence function*(col.7 lines 13-31 and col.8 lines 29-37; if the system is not confident, it will not perform the action).*

Regarding claim 25, Beyda teaches the automated task classification system of claim 1, wherein the input communication from the user represents a request for at least one of the set of predetermined task objectives.

Regarding claim 26, Beyda teaches the automated task classification system of claim 1, wherein the input communication is responsive to a query of a form "How may I help you?"(*col.7 lines 13-31 and col.8 lines 29-37;* this question can be asked in multiple ways/forms; Beyda prompts the user to help).

Regarding claim 27, Beyda teaches the automated task classification system of claim 1, wherein each of the verbal input and the non-verbal input are directed to one of the set of predetermined task objectives and each of the verbal input and the non-verbal input is labeled with the one task objective to which it is directed(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 28, Beyda teaches an automated routing system that automatically routes a user's request based on an automated task classification decision, comprising:

a recognizer that spots at least one of the plurality of meaningful phrases in substantially simultaneous user verbal input and non-verbal input(Fig.1-2, col.7 lines 12-30, and col.8 lines 29-37), each of the plurality of meaningful phrases having an association with at least one of a predetermined set of task objectives(col.7 lines 13-31);

a task classifier that makes a classification decision based. at least partly on the spotted at least one of the plurality of meaningful phrases and

a task router that routes the user's request in order to perform at least one of the task

objectives based on the classification decision(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Beyda does not specifically disclose the user verbal and non-verbal input being simultaneous.

However Beyda does disclose the user being able to perform verbal and non-verbal input within the same communication(col.8 lines 29-37) and therefore reads on the claimed phrase "substantially simultaneous". It is noted that the term "substantially" is not definite and is not limited by a range, therefore the examiner reads "substantially simultaneous" as within the same communication which Beyda performs(col.7 lines 12-31 and col.8 lines 29-37).

Regarding claim 29, Beyda teaches the automated routing system of claim 28, wherein the meaningful phrases are expressed in multimodal form(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 30, Beyda teaches the automated routing system of claim 29, wherein the multimodal form includes inputs from at least one channel(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 34, Beyda teaches the automated routing system of claim 28, wherein the meaningful phrases in the user's input communication received by the recognizer are derived from the user's actions(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 36, Beyda teaches the automated routing system of claim 28, further comprising a dialog module that enters into a dialog with the user to obtain a

feedback response from the user(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 37, Beyda teaches the automated routing system of claim 36, wherein the dialog module prompts the user to provide a feedback response that includes additional information with respect to the user's request(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 38, Beyda teaches the automated routing system of clam 36, wherein the dialog module prompts the user to provide a feedback response that includes confirmation with respect to at least one of the set of task objectives determined in the classification decision(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 39, Beyda teaches the automated routing system of claim 36, wherein if the task classifier cannot make a classification decision after the dialog is conducted with the user, the router routes the user's request to a human for assistance(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 40, Beyda teaches the automated routing system of claim 39, wherein the task objectiveis performed after the user's request is routed(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 42, Beyda teaches the automated routing system of claim 28, wherein the system is used for customer care purposes(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 43, Beyda teaches the automated routing system of claim 28, wherein the classification decision and the corresponding user request are collected by the system for automated learning purposes(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 44, Beyda teaches the automated routing system of claim 28, wherein the association between the pluralitv of meaningful phrases and the predetermined set of task objectives ' is based. at least partlv. on a measure of usefulness of ((a11 one of the pluralitv of meaningful phrases to a specified one of the predetermined task objectives(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 45, Beyda teaches the automated routing system of claim 44, wherein the usefulness measure is a Salience measure(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 46, Beyda teaches the automated routing system of claim 45, wherein the salience measure is represented as a conditional probability of the task objective being requested given an appearance of the meaningful phrase in the user's request, the conditional probability being a highest value in a distribution of (lthell conditional probabilities over the set of predetermined task objectives(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 47, Beyda teaches the automated routing system of claim 45, wherein each of the plurality of meaningful phrases has a salience measure

exceeding a predetermined threshold(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 48, Beyda teaches the automated routing system of claim 28, wherein the association between the plurality of meaningful phrases and the predetermined set of task objectives ' is based. at least partlv. on a measure of commonality with a language of the pluralitv of meaningful phrases(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 49, Beyda teaches the automated routing system of claim 48, wherein the measure of commonalitv is a mutual information measure(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 50, Beyda teaches the automated routing system of claim 49, wherein each of the plurality of meaningful phrases has a mutual information measure exceeding a predetermined threshold(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 51, Beyda teaches the automated routing system of claim 28, wherein the task classifier makes the classification decision using a confidence function(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

Regarding claim 52, Beyda teaches the automated routing system of claim 28, wherein the user's request represents a request for at least one of the set of predetermined task objectives(col.7 lines 13-31, col.8 lines 29-37, and col.9 line 65-col.10 line 17).

29-37, and col.9 line 65-col.10 line 17).

Response to Arguments

4. Applicant's arguments with respect to claims **1-3, 7, 9-13, 15-30, 34-40, 42-54, and 56-57** have been considered but are moot in view of the new ground(s) of rejection.

It is noted that Beyda teaches verbal and non-verbal input at each hierarchical prompt(col.7 lines 12-30) and therefore reads on the claimed "substantially simultaneous" as the claims do not define the metes and bounds of the term substantially, which the examiner reads as within the same communication.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph T. Phan whose telephone number is (571) 272-7544. The examiner can normally be reached on Mon-Fri 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTP
May 25, 2007 JTP

RAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600